

Substitute Form PTO-1449 (Modified)	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 17738-003001	Application No. 10/728,195
Information Disclosure Statement by Applicant (Use several sheets if necessary) (37 CFR §1.98(b))		Applicant Lu et al.	
		Filing Date December 3, 2003	Group Art Unit 1648

U.S. Patent Documents							
Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Class	Subclass	Filing Date If Appropriate
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Foreign Patent Documents or Published Foreign Patent Applications								
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							Yes	No
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Other Documents (include Author, Title, Date, and Place of Publication)		
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/B.P./	C1	Alonso et al., "Biodegradable microspheres as controlled-release tetanus toxoid delivery systems," Vaccine 12:299-306 (1994)
	C2	Bagarazzi et al., "Nucleic acid-based vaccines as an approach to immunization against human immunodeficiency virus type-1," Curr. Top Microbiol. Immunol. 226:107-43 (1998)
	C3	Barnett et al., "The ability of an oligomeric human immunodeficiency virus type 1 (HIV-1) envelope antigen to elicit neutralizing antibodies against primary HIV-1 isolates is improved following partial deletion of the second hypervariable region," J. Virol. 75:5526-40 (2001)
	C4	Barouch et al., "Eventual AIDS vaccine failure in a rhesus monkey by viral escape from cytotoxic T lymphocytes," Nature 415(6869):335-9 (2002)
	C5	Boyer et al., "Protection of chimpanzees from high-dose heterologous HIV-1 challenge by DNA vaccination," Nat. Med. 3(5):526-32 (1997)
	C6	Chakrabarti et al., "Modifications of the human immunodeficiency virus envelope glycoprotein enhance immunogenicity for genetic immunization," J. Virol. 76(11):5357-68 (2002)
	C7	Chapman, et al., "Effect of intron A from human cytomegalovirus (Towne) immediate-early gene on heterologous expression in mammalian cells," Nucleic Acids Res. 19:3979-3986 (1991)
	C8	Clements et al., "Cross-protective immune responses induced in rhesus macaques by immunization with attenuated macrophage-tropic simian immunodeficiency virus," J. Virol. 69: 2737 (1995)
	C9	Cristillo et al., "Preclinical evaluation of cellular immune responses elicited by a polyvalent DNA prime/protein boost HIV-1 vaccine," Virology 346(1):151-68 (2006)
	C10	Eldridge et al., "Biodegradable microspheres as a vaccine delivery system," Molec. Immunol. 28:287-94 (1991)
	C11	Goulder et al., "Evolution and transmission of stable CTL escape mutations in HIV infection," Nature 412:334-338 (2001)
	C12	Goulder et al., "Late escape from an immunodominant cytotoxic T-lymphocyte response associated with progression to AIDS," Nature Med. 3:212-217 (1997)
	C13	Hu et al., "The immunostimulating complex (ISCOM) is an efficient mucosal delivery system for respiratory syncytial virus (RSV) envelope antigens inducing high local and systemic antibody responses," Clin. Exp. Immunol. 113:235-43 (1998)
	C14	Hurwitz et al., "Application of the polyvalent approach to HIV-1 vaccine development," Curr. Drug Targets Infect. Disord. 5(2):143-56 (2005)

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↓	C16	Jones et al., "Protection of mice from Bordetella pertussis respiratory infection using microencapsulated pertussis fimbriae," Vaccine 13(7):675-81 (1995)
↓	C17	Kensil, et al., "QS-21 and QS-7: purified saponin adjuvants," Dev. Biol. Stand. 92:41-7 (1998)
↓	C18	Kong et al., "Immunogenicity of multiple gene and clade human immunodeficiency virus type 1 DNA vaccines," J. Virol. 77:12764-772 (2003)
↓	C19	Letvin et al., "Immunogenicity of multiple gene and clade human immunodeficiency virus type 1 DNA vaccines," Proc. Natl. Acad. Sci. USA 94(17):9378-83 (1997)
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/B.P./	C20	Ljungberg et al., "Enhanced immune responses after DNA vaccination with combined envelope genes from different HIV-1 subtypes," Virology 302(1):44-57 (2002)
	C21	Lu et al., "Immunogenicity of DNA vaccines expressing human immunodeficiency virus type 1 envelope glycoprotein with and without deletions in the V1/2 and V3 regions," AIDS Res. Hum. Retroviruses 14(2):151-5 (1998)
	C22	Lu et al., "Simian immunodeficiency virus DNA vaccine trial in macaques," J. Virol. 70(6):3978-991 (1996)
	C23	MacGregor et al., "First human trial of a DNA-based vaccine for treatment of human immunodeficiency virus type 1 infection: safety and host response," J. Infect. Dis. 178(1):92-100 (1998)
	C24	Mascola et al., "Immunization with envelope subunit vaccine products elicits neutralizing antibodies against laboratory-adapted but not primary isolates of human immunodeficiency virus type 1. The National Institute of Allergy and Infectious Diseases AIDS Vaccine Evaluation Group," J. Infect. Dis. 173:340-348 (1996)
	C25	Mascola, et al., "Human immunodeficiency virus type 1 neutralization measured by flow cytometric quantitation of single-round infection of primary human T cells," J. Virol. 76(10):4810-21 (2002)
	C26	McMichael and Hanke, "The quest for an AIDS vaccine: is the CD8+ T-cell approach feasible?" Nat. Rev. Immunol. 2(4):283-91 (2002)
	C27	Montefiori et al., "Evaluation of antiviral drugs and neutralizing antibodies to human immunodeficiency virus by a rapid and sensitive microtiter infection assay," J. Clin. Microbiol., 26:231-237 (1988)
	C28	Pal et al., "Immunization of rhesus macaques with a polyvalent DNA prime/protein boost human immunodeficiency virus type 1 vaccine elicits protective antibody response against simian human immunodeficiency virus of R5 phenotype," Virology (2006 Feb 2)
	C29	Qiu, et al., "Enhancement of primary and secondary cellular immune responses against human immunodeficiency virus type 1 gag by using DNA expression vectors that target Gag antigen to the secretory pathway," J. Virology. 74(13):5997-6005 (2000)
	C30	Rencher and Hurwitz, "Effect of natural HIV-1 envelope V1-V2 sequence diversity on the binding of V3-specific and non-V3-specific antibodies," J. Acquir. Immune Defic. Syndr. Hum. Retrovirol. 16(2):69-73 (1997)

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↓	C32	Richmond et al., "Screening of HIV-1 Env glycoproteins for the ability to raise neutralizing antibody using DNA immunization and recombinant vaccinia virus boosting," Virology 230(2):265-74 (1997)
	C33	Robinson, "DNA vaccines for immunodeficiency viruses," AIDS 11(Suppl A):S109-19 (1997)
	C34	Stambas et al., "Long lived multi-isotype anti-HIV antibody responses following a prime-double boost immunization strategy," Vaccine 23(19):2454-64 (2005)
	C35	Takahashi et al., "Induction of CD8+ cytotoxic T cells by immunization with purified HIV-1 envelope protein in ISCOMs," Nature 344:873-75 (1990)
	C36	Vitiello et al., "Development of a lipopeptide-based therapeutic vaccine to treat chronic HBV infection. I. Induction of a primary cytotoxic T lymphocyte response in humans," J. Clin. Invest. 95:341-49 (1995)
	C37	Wang et al., "Polyvalent HIV-1 Env vaccine formulations delivered by the DNA priming plus protein boosting approach are effective in generating neutralizing antibodies against primary human immunodeficiency virus type 1 isolates from subtypes A, B, C, D and E," Virology (2006 Apr 6)
	C38	Weber et al., "Neutralization serotypes of human immunodeficiency virus type 1 field isolates are not predicted by genetic subtype. The WHO Network for HIV Isolation and Characterization," Virol. 70: 7827-832 (1996)
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/B.P./	C40	Zhan et al., "Minor components of a multi-envelope HIV vaccine are recognized by type-specific T-helper cells," Vaccine 22(9-10):1206-13 (2004)
/B.P./	C41	Zolla-Pazner et al., "Immunotyping of human immunodeficiency virus type 1 (HIV): an approach to immunologic classification of HIV," J. Virol. 73: 4042-51 (1999)
/B.P./	C42	HIV Vaccine Development Status Report, May 2000, http://niaid.gov/daids/vaccine/whsummarystatus.htm
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